

SEQUENCE LISTING

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<120> TITLE: MELANOCORTIN-3 RECEPTOR DEFICIENT CELLS
 , NON-HUMAN TRANSGENIC ANIMALS AND METHODS OF SELECTING
 COMPOUNDS WHICH REGULATE BODY WEIGHT

<130> DOCKET/FILE REFERENCE: 20561Y

<160> NUMBER OF SEQUENCES: 15

<170> SOFTWARE: FastSEQ for Windows Version 4.0

<210> SEQ ID NO:1

<211> LENGTH: 1675

<212> TYPE: DNA

<213> ORGANISM:Mus musculus (house mouse)

<400> SEQ ID NO:1

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ctgctgcctg tcttctgttt ctccgatgct gcctaaccctc tctgagcacc ctgcagcccc	180
tcctgccagc aaccggagcg gcagtgggtt ctgtgagcag gtctcatca agccggaggt	240
cttcctggct ctgggcatcg tcagtcgtat ggaaaacatc ctggtgatcc tggctgttgtt	300
caggaatggc aacctgcact ctcccattgtt cttcttcctg tgca gctggcctgg ctgcagccga	360
catgctggtg agcctgtcca actccctggaa gaccatcatg atcggcgtga tcaacagcga	420
ctccctgacc ttggaggacc agtttatcca gcacatggat aatatcttcg actctatgtat	480
ttgcatctcc ctggtggcct ccatctgcaa ctcctggcc attgccatcg acaggtacgt	540
caccatcttc tatgcccttc ggtaccacag catcatgaca gtaggaaag ccctcacctt	600
gatcggggttc atctgggtct gtcggcat ctgcggcgtg atgttcatca tctactccga	660
gagcaagatg gtcatctgtt gtctcatcac catgttcttc gccatggtc tcctcatggg	720
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tgcttcaagc caaccagacc ggagggtct ctgtgagcaga aagagtgtt agacttccgg	1440
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tctgtggag attgagtgtt gcccgtaaaa caatgtgata tttgtgtct ccttccagaa	1560
cttacatctg tgccagcctc cccgaacccc tgcacagaga catgaccccc ttctccctgt	1620
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<210> SEQ ID NO:2
 <211> LENGTH: 323
 <212> TYPE: PRT
 <213> ORGANISM:Mus musculus (house mouse)

<400> SEQ ID NO:2
 Met Asn Ser Ser Cys Cys Leu Ser Ser Val Ser Pro Met Leu Pro Asn
 1 5 10 15
 Leu Ser Glu His Pro Ala Ala Pro Pro Ala Ser Asn Arg Ser Gly Ser
 20 25 30
 Gly Phe Cys Glu Gln Val Phe Ile Lys Pro Glu Val Phe Leu Ala Leu
 35 40 45
 Gly Ile Val Ser Leu Met Glu Asn Ile Leu Val Ile Leu Ala Val Val
 50 55 60
 Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe Phe Leu Cys Ser Leu
 65 70 75 80
 Ala Ala Ala Asp Met Leu Val Ser Leu Ser Asn Ser Leu Glu Thr Ile
 85 90 95
 Met Ile Ala Val Ile Asn Ser Asp Ser Leu Thr Leu Glu Asp Gln Phe
 100 105 110
 Ile Gln His Met Asp Asn Ile Phe Asp Ser Met Ile Cys Ile Ser Leu
 115 120 125
 Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala Ile Asp Arg Tyr Val
 130 135 140
 Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Met Thr Val Arg Lys
 145 150 155 160
 Ala Leu Thr Leu Ile Gly Val Ile Trp Val Cys Cys Gly Ile Cys Gly
 165 170 175
 Val Met Phe Ile Ile Tyr Ser Glu Ser Lys Met Val Ile Val Cys Leu
 180 185 190
 Ile Thr Met Phe Phe Ala Met Val Leu Leu Met Gly Thr Leu Tyr Ile
 195 200 205
 His Met Phe Leu Phe Ala Arg Leu His Val Gln Arg Ile Ala Val Leu
 210 215 220
 Pro Pro Ala Gly Val Val Ala Pro Gln Gln His Ser Cys Met Lys Gly
 225 230 235 240
 Ala Val Thr Ile Thr Ile Leu Leu Gly Val Phe Ile Phe Cys Trp Ala
 245 250 255
 Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr Cys Pro Thr Asn Pro
 260 265 270
 Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr Tyr Leu Val Leu Ile
 275 280 285
 Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr Ala Phe Arg Ser Leu
 290 295 300
 Glu Leu Arg Asn Thr Phe Lys Glu Ile Leu Cys Gly Cys Asn Ser Met
 305 310 315 320
 Asn Leu Gly

<210> SEQ ID NO:3
 <211> LENGTH: 1080
 <212> TYPE: DNA
 <213> ORGANISM:Homo sapien

<400> SEQ ID NO:3
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 ttcctacgga ccctgctgga gccccagctc ggatcagccc ttctgacagc aatgaatgct 120
 tcgtgctgcc tgccctctgt tcagccaaca ctgcctaatg gctcgagca cctccaagcc 180
 cctttttaa gcaaccagag cagcagcgcc ttctgtgaagc aggttcat caagcccgag 240
 attttcctgt ctctggccat cgtcagtctg ctggaaaaca tcctggttat cctggccgtg 300

gtcaggaacg gcaacctgca ctccccatgc tacttcttc tctgcagccct ggccgggcc	360
gacatgctgg taagtgtgtc caatgccctg gagaccatca tgatgccat cgtccacagc	420
gactacctga ccttcgagga ccagtttac cagcacatgg acaacatctt cgactccatg	480
atctgcatct ccctgggtgc ctccatctgc aacctcctgg ccacatcggtc cgacaggta	540
gtcaccatct ttacgcgct ccgctaccac agcatcatga ccgtgaggaa ggccctcacc	600
ttgatcgtgg ccatctgggt ctgctgcggc gtctgtggcg tggtgttcat cgtctactcg	660
gagagaaaa tggtcattgt gtgcctcatc accatgttct tcgcctatgat gtcctcatg	720
ggcacccctct acgtgcacat gttectctt gcgcggctgc acgtcaagcg catagcagca	780
ctgccacctg ccgacggggt ggcccacag caacactcat gcatgaaggg ggcagtcacc	840
atcaccatcc tcctgggcgt gtcatcttc tgctgggccc ccttcttctt ccacctggtc	900
ctcatcatca cctgccccac caaccctac tcgcacatgt acactgcccctt caaacacc	960
tacctggtcc tcgcacatgt caactccgac atgcacccac tcgcacatgc ttccggagc	1020
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<210> SEQ ID NO:4

<211> LENGTH: 360

<212> TYPE: PRT

<213> ORGANISM:Homo sapien

<400> SEQ ID NO:4

Met Ser Ile Gln Lys Tyr Leu Glu Gly Asp Phe Val Phe Pro Val	
1 5 10 15	
Ser Ser Ser Phe Leu Arg Thr Leu Leu Glu Pro Gln Leu Gly Ser	
20 25 30	
Ala Leu Leu Thr Ala Met Asn Ala Ser Cys Cys Leu Pro Ser Val Gln	
35 40 45	
Pro Thr Leu Pro Asn Gly Ser Glu His Leu Gln Ala Pro Phe Phe Ser	
50 55 60	
Asn Gln Ser Ser Ser Ala Phe Cys Glu Gln Val Phe Ile Lys Pro Glu	
65 70 75 80	
Ile Phe Leu Ser Leu Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val	
85 90 95	
Ile Leu Ala Val Val Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe	
100 105 110	
Phe Leu Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser Asn	
115 120 125	
Ala Leu Glu Thr Ile Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr	
130 135 140	
Phe Glu Asp Gln Phe Ile Gln His Met Asp Asn Ile Phe Asp Ser Met	
145 150 155 160	
Ile Cys Ile Ser Leu Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala	
165 170 175	
Val Asp Arg Tyr Val Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile	
180 185 190	
Met Thr Val Arg Lys Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys	
195 200 205	
Cys Gly Val Cys Gly Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met	
210 215 220	
Val Ile Val Cys Leu Ile Thr Met Phe Phe Ala Met Met Leu Leu Met	
225 230 235 240	
Gly Thr Leu Tyr Val His Met Phe Leu Phe Ala Arg Leu His Val Lys	
245 250 255	
Arg Ile Ala Ala Leu Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His	
260 265 270	
Ser Cys Met Lys Gly Ala Val Thr Ile Thr Ile Leu Leu Gly Val Phe	
275 280 285	
Ile Phe Cys Trp Ala Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr	
290 295 300	
Cys Pro Thr Asn Pro Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr	
305 310 315 320	

Tyr Leu Val Leu Ile Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr
 325 330 335
 Ala Phe Arg Ser Leu Glu Leu Arg Asn Thr Phe Arg Glu Ile Leu Cys
 340 345 350
 Gly Cys Asn Gly Met Asn Leu Gly
 355 360

<210> SEQ ID NO:5
<211> LENGTH: 28
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:5
gatgagagaa gactggagag agagggtc

28

<210> SEQ ID NO:6
<211> LENGTH: 27
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:6
gaagaagtac atgggagagt gcagggtt

27

<210> SEQ ID NO:7
<211> LENGTH: 27
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:7
gatgagagaa gactggagga gagggtc

27

<210> SEQ ID NO:8
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:8
taccgggtgga tgtggaatgt gtgc

24

<210> SEQ ID NO:9
<211> LENGTH: 45
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:9
agccaggatc accaggatgt tttccatcatg actgacgatg cccag 45

<210> SEQ ID NO:10
<211> LENGTH: 45
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:10
tgcccatttag gaggaccatg gcgaagaaca tggtgatgag gcaca 45

<210> SEQ ID NO:11
<211> LENGTH: 45
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:11
atgatgagga ccaggtggag gaagaaaaggc gcccagcaga agatg 45

<210> SEQ ID NO:12
<211> LENGTH: 25
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:12
ctaacccataaa gaaaatcagca gcccg 25

<210> SEQ ID NO:13
<211> LENGTH: 25
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:13
aggaaagtat acatgccatg gtgg 25

<210> SEQ ID NO:14
<211> LENGTH: 25
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:14
ctaacccataaa gaaaatcagca gcccg 25

<210> SEQ ID NO:15
<211> LENGTH: 24
<212> TYPE: DNA
<213> ORGANISM:Artificial Sequence

<220> FEATURE:
<223> OTHER INFORMATION: oligonucleotide

<400> SEQ ID NO:15
taccgggtgga tgtggaatgt gtgc